a buffer control means, coupled to said input buffering means, said output buffering means, and said disc recording means, for controlling recording and reproduction of said disc recording means according to respective remaining capacities of said input and output buffering means.

30. The video data recording and reproducing system according to claim 26, wherein said data transfer circuit includes:

a write buffer circuit, coupled to said video tape recorder and said disc recorder, said write buffer circuit configured to buffer said reproduced video data;

a read buffer circuit, coupled to said video tape recorder and said disc recorder, said read buffer circuit configured to buffer said edited video data; and

a buffer control circuit, coupled to said input buffer circuit, said output buffer circuit, and said disc recorder, said buffer control circuit configured to control recording and reproduction of said disc recording means according to respective remaining capacities of said input and output buffer circuits.--

REMARKS

Claims 8-20 were pending in this application. Claims 8-9 and 17-20 have been canceled without prejudice. Claims 10-11 and 13-16 have been amended. New claims 21-30 have been added to further claim applicants' invention. Accordingly, claims 10-16 and 21-30 are now pending. The specification has been amended to correct a grammatical error. It is respectfully submitted that such amendments are supported by the specification, claims, abstract of the disclosure and the drawings as originally filed, and that no new matter has been added.

Amendments to the Specification

Applicants' undersigned attorney apologizes for duplicating the preliminary amendment filed September 3, 1997 in the amendment filed on September 2, 1998.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejects claims 8-20 under 35 U.S.C. § 103 as being unpatentable over Lang, U.S. Patent No. 5,164,839, in view of Takada et al., U.S. Patent No. 5,715,104 (hereinafter "Takada").

Regarding claims 8-9, 12-13, and 15-20, the Examiner states that Lang discloses in Fig. 2 a video data recording and reproducing apparatus for editing (see col. 2, lines 29-32) a source video data (see "TV Tuner 16"), said system comprising: a video tape recording means (see col. 3, lines 37-39, ". . . AVRU 11 may be a VCR . . ." or a tape recording means) for recording onto a tape medium with a first data rate (the first rate is the real time input rate from the source through "tuner 16").

The Examiner states that Lang further discloses a disc recording means (see col. 6, lines 28-42 "optical disc memories . . . magnetic disks . . . etc." and at col. 1, lines 36-43, ". . . editing recorded programs and high speed recording . . ." and at col. 8, lines 18-33, "The VCR-ET can receive/transmit a video program at an accelerated rate via fiber optic port 18 from/to a variety of sources. For example a video program may be communicated at an accelerated rate from the first VCR-ET to a second VCR-ET in less time than it would take to view the program. Thus, it is not necessary to access the optical fiber for long periods of time in order to transmit a long video program."), and an editing means for editing a plurality of portions as dictated by the user (see col. 6, lines 46-52). The Examiner further states that in the digital environment,

Lang can provide high speed input/output of information to and from VCR-ET 10.

The Examiner further states that Lang discloses an AUX Digital Input 17 in Fig. 2 to the high speed data bus and further discloses the ability to transfer information to and from the high speed bus at high transfer rates. The Examiner concedes that Lang fails to disclose wherein the tape recording medium is capable of transferring recorded information at high speed, clearly due to the limitation of the A/D conversion process in the era of Lang (1988).

The Examiner states that Takada teaches the process of high speed dubbing utilizing a digital video tape recorder (see col. 3, lines 1-4) having digital and analog inputs and outputs to perform the process of high speed dubbing (see Abstract), utilizing the digital inputs and outputs.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lang by incorporating a digital tape recording medium having a high speed dubbing capability as an input to the high speed bus of the editing system, as taught by Takada, in order to perform high speed dubbing capability allowing dubbing at a higher than real time recording rate as taught by Takada. The Examiner further states that since Lang discloses inputting and outputting at high speed from a variety of sources, the disc of Lang clearly can provide control of outputting of information at higher and lower or at the normal recording speed, to and from the high speed dubbing digital VCR of Takada or any other source available.

Regarding claims 10-11, the Examiner states that the combination of Lang and Takada meets the limitations of recording and reproducing information from the high speed bus from the disc means, to any source or destination such as the tape recording and

reproducing means (Takada), wherein the editing means control the reproducing operation from said disc recording means.

Regarding claim 14, the Examiner states that the combination of Lang and Takada further meets the limitation of a transfer means (see Fig. 2, high speed bus 34) for transferring the reproduced video data from the tape recording means (Takada), and said edited video data reproduced from the disc recording means.

In response, claims 8-9 and 17-20 have been canceled without prejudice, the rejection of claims 10-15 is respectfully traversed, and claim 16 has been amended.

Claim 10, as amended to include the features of its canceled parent claim 8, recites "wherein said **editing means . . . controls** said recording operation of said **video tape recording means . . . .**" It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature.

The rule is that the prior art reference (or references when combined) must teach or suggest all the claim features. See MPEP § 2142. The Examiner asserts, as understood, that Takada teaches a high speed dubbing tape device, and that Lang teaches high speed inputs 17 and 18 connected to high speed bus 34, and a DCU 14 for editing. Thus, in order to read on amended claim 10, Lang in view of Takada must teach or suggest "wherein Lang's DCU controls the recording operation of Takada's tape device".

It is respectfully submitted that Lang in view of Takada fails to teach or suggest this. Lang teaches that the fiber optic port 18 delivers signals to a fiber optic line from the high speed bus 34. See col. 8, lines 11-14. However, Lang as understood fails to teach or suggest that commands may also be delivered to control the recording operation of the device connected to the fiber optic line, Takada's tape device. Furthermore, Takada as understood fails to

teach or suggest how the tape device can receive commands from a connected device for control purposes.

In summary, the Examiner as understood asserts that Takada's tape device may be **connected to** Lang; however, this fails to read on claim 10, which recites that the tape recording means is **controlled by** the editing means. Thus, it is respectfully submitted that claim 10 is allowable over Lang in view of Takada.

Claim 11, as amended to include the features of its canceled parent claim 8, recites "wherein said **editing means** . . . **controls** said recording operation of said **video tape recording means** . . . ." It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature, for the same reasons given above regarding claim 10. Thus, it is respectfully submitted that claim 11 is allowable over Lang in view of Takada.

It is respectfully submitted that claim 12 and claims 13-15 (as amended to be dependent from claim 11) are allowable as claims dependent from allowable amended claim 11, as argued above.

Claim 16 has been amended to recite a "control circuit configured to control a recording operation of said video tape recorder to record said edited video data". Support can be found in the specification at page 18, lines 15-24; and in the drawings at FIG. 1, element 50. It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature, for the same reasons given above regarding claim 10.

New Claims

New claims 21-24 correspond to claims 12-15, respectively, as currently pending but dependent from amended claim 10.

New claims 25-27 correspond to claims 13-14, respectively, as currently pending but dependent from amended claim 16.

Support for the data transfer circuit can be found in the specification at page 14, line 22 through page 15, line 4; and in the drawings at FIG. 1, element 40. Support for the video interface circuit can be found in the drawings at FIG. 1, element 24. Support for the digital interface circuit can be found in the drawings at FIG. 1, element 44.

It is respectfully submitted that claims 21-27 are allowable as discussed above regarding the claims to which they respectively correspond.

New claims 28-30 further define the data transfer circuit. Support for the input buffering means, output buffering means, and buffer control means can be found in the specification at page 7, lines 12-23. Support for the input buffer circuit, output buffer circuit, and buffer control circuit can be found in FIG. 3, elements 412, 414, and 410, respectively. It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature because of the recited relationship between the buffers, the buffer controller, the tape recorder, and the disc recorder.

Conclusion

In view of the above, it is respectfully submitted that the application is now in condition for allowance. The Examiner's reconsideration and further examination are respectfully requested.

Respectfully submitted,
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Dated: 17 Feb 99

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